

AMENDMENTS TO THE CLAIMS

1. (CURRENTLY AMENDED) A method of estimating pitch in a speech signal, the method comprising the steps of:
 - sampling the speech signal to obtain a series of samples,
 - dividing the series of samples into segments, each segment having a fixed number of consecutive samples,
 - calculating for each segment ~~a conformity~~ an autocorrelation function for the signal,
 - detecting peaks in the ~~conformity~~ autocorrelation function,
~~the method further comprising the steps of:~~
 - providing an intermediate signal derived from the speech signal,
 - converting said intermediate signal to a binary signal, said binary signal being set to logical “1” where the intermediate signal exceeds a pre-selected threshold and to logical “0” where the intermediate signal does not exceed the pre-selected threshold,
 - calculating an autocorrelation of the binary signal, and
 - using distance between peaks in the autocorrelation of the binary signal as an estimate of the pitch.
2. (CURRENTLY AMENDED) A ~~The~~ method according to claim 1, wherein the intermediate signal is provided by filtering the speech signal through a filter based on a set of filter parameters estimated by using linear predictive analysis (LPA).
3. (CURRENTLY AMENDED) A ~~The~~ method according to claim 1, wherein the intermediate signal is provided by calculating the autocorrelation of a signal derived from the speech signal by filtering the speech signal through a filter based on a set of filter parameters estimated by means of linear predictive analysis (LPA).
4. (CURRENTLY AMENDED) A ~~The~~ method according to claim 1, further comprising the step of:
 - selecting, if the peak corresponding to the distance between the peaks is represented by a number of samples, the sample having the maximum amplitude of said ~~conformity~~ autocorrelation function as the estimate of the pitch.
5. (ORIGINAL) Use of the method according to claim 1 in a mobile telephone.
6. (CURRENTLY AMENDED) A device adapted to estimate pitch of a speech signal, comprising:
 - a sampler for sampling the speech signal to obtain a series of samples,
 - a divider for dividing the series of samples into segments, each segment having a fixed number of consecutive samples,
 - an autocorrelation calculation unit for calculating for each segment ~~a conformity~~ an autocorrelation function for the signal, and
 - a peak detector for detecting peaks in the ~~conformity~~ autocorrelation function, and
~~the device further comprising a programmed unit:~~
 - for providing an intermediate signal derived from the speech signal,
 - for converting said intermediate signal to a binary signal, said binary signal being set to logical “1” where the intermediate signal exceeds a pre-selected threshold and to logical “0” where the intermediate signal does not exceed the pre-selected threshold,

— for calculating the autocorrelation of the binary signal, and
— for using distance between peaks in the autocorrelation of the binary signal as an estimate of the pitch.

7. (CURRENTLY AMENDED) A The device according to claim 6, which includes a filter which is adapted to provide the intermediate signal by filtering the speech signal through the filter based on a set of filter parameters estimated by means of linear predictive analysis (LFA).

8. (CURRENTLY AMENDED) A The device according to claim 6, including a filter which is adapted to provide the intermediate signal by calculating an autocorrelation of a signal derived from the speech signal by filtering the speech signal through the filter based on a set of filter parameters estimated by means of linear predictive analysis (LPA).

9. (CURRENTLY AMENDED) A The device according to claim 6, which is further adapted to select, if a peak corresponding to the distance between the peaks is represented by a number of samples, the sample having the maximum amplitude of said econformity autocorrelation function as the estimate of the pitch.

10. (CURRENTLY AMENDED) A The device according to claim 6, wherein the device is a mobile telephone.

11. (CURRENTLY AMENDED) A The device according to claim 6, wherein the device is an integrated circuit.

12. (NEW) The method of claim 1, wherein:
the provided intermediate signal is derived from the autocorrelation function of the speech signal, and
the binary signal is set to logical “1” where a peak value in an autocorrelation sequence of the intermediate signal exceeds a pre-selected threshold and to logical “0” where a peak value of an autocorrelation sequence of the intermediate signal does not exceed the pre-selected threshold.

13. (NEW) The device of claim 6, wherein:
the provided intermediate signal is derived from the autocorrelation function of the speech signal, and
the binary signal is set to logical “1” where a peak value in an autocorrelation sequence of the intermediate signal exceeds a pre-selected threshold and to logical “0” where a peak value of an autocorrelation sequence of the intermediate signal does not exceed the pre-selected threshold.